

REMARKS

I. Status Summary

Claims 1-9 are pending in the present application and claims 1-9 stand rejected. Claims 1, 7, and 8 have been amended herein. Therefore, upon entry of this amendment, Claims 1-9 will remain pending. No new matter has been introduced by the present Amendment. Reconsideration of the application as amended and based on the arguments set forth hereinbelow is respectfully requested.

II. Specification

The Examiner objected to the Abstract of the Disclosure. In particular, the Examiner states that the phrase "codec circuit having a programmable digital bandpass filter" is repetitious and should be deleted. (See page 2, of the Official Action). Further, the Examiner states that use of the word "can" in the Abstract should be avoided. (See page 2, of the Official Action). Applicant has amended the Abstract of the Disclosure in accordance with the Examiner's suggestions. In view of the above amendments to the Abstract of the Disclosure, it is respectfully submitted that the objections to the Abstract should be withdrawn.

III. Claim Objections

Claims 1, 7, and 8 stand objected to because of informalities. Regarding Claim 1, the Examiner states that the word "can" should be replaced and the word "be" should be deleted. (See page 3, of the Official Action). Applicant has amended Claim 1 to replace the phrase "can each be" with the phrase "are each".

Regarding claims 7 and 8, the Examiner states that the phrase "can be" should be replaced with the word "is". (See page 3, of the Official Action). Applicant has amended Claims 7 and 8 to replace the phrase "can be" with the word "is".

Further, regarding Claims 7 and 8, the Examiner states that the second word "setting" should be deleted. Applicant respectfully submits that the second word "setting" is appropriate because it is part of the term "setting filter coefficients," which is introduced in Claim 1:

In view of the above amendments and remarks with regard to Claims 1, 7, and 8, applicant respectfully requests that the objection to Claims 1, 7, and 8 be withdrawn and the claims allowed at this time.

IV. Claim Rejections Under 35 U.S.C. § 103

Claims 1-9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,058,047 to Chung (hereinafter, "Chung") in view of U.S. Patent No. 6,389,069 to Mathe (hereinafter, "Mathe"). These rejections are respectfully traversed.

Initially, we note that the Examiner contends that the claim features upon which applicant relies are not recited in the claims. (See pages 3 and 4, of the Official Action). In particular, the Examiner contends that the claim features of identifying an incoming PCM signal and selecting the ranges of the coefficient in accordance with the identified PCM signal. (See page 4, of the Official Action). Claim 1 has been amended to include clarifying language with regard to the identification of a PCM signal and selection of a coefficient based on the identified PCM signal. In particular, Claim 1 has been amended to recite that setting filter coefficients for the programmable digital high-

pass and low-pass filters are each set based on identification of a PCM signal transmitted through the codec circuit. Further, Claim 1 has been amended to recite that the PCM signal is identified by means of a signal identification device configured to identify the PCM signal, in order to vary a bandpass filter characteristic for the programmable digital bandpass filter. Applicant respectfully submits that the language of Claim 1 is clarified by these amendments. Further, applicant respectfully submits that these features are not taught or suggested by Chung and Mathe, either alone or in combination.

Chung is directed to a system and method for generating coefficients for use in a digital filter. The coefficients are generated utilizing an iterative adaptive process employing a least mean square process wherein the filter coefficients are updated by an amount during each iteration dependent upon the stochastic average of the gradient generated during prior iterations. The response of a filter standard to an applied input signal is combined with a response of the adaptive filter coefficients to generate, during each iteration, an error signal. If the error signal is less than a predetermined standard, the iterative process is stopped, and the last used filter coefficients are utilized as the final filter coefficients of the digital filter.

In particular, Chung discloses transferring PCM samples to a time slot assigning circuit for receiving the PCM samples from a PCM highway, wherein a path is recognized for processing the PCM samples. (See column 4, lines 19-27, of Chung). Chung fails to disclose or suggest that any modifications to the codec circuit are taking place based on the type of the PCM signals. Further, circuit 10 of Chung only

recognizes when a PCM signal is received. There is no disclosure or suggestion that circuit 10 determines or identifies a type of PCM signal. Further, there is no disclosure or suggestion of determining or identifying a type of PCM signal based on either a type of modulation or a transmission speed of the PCM signal. As such, Chung does not disclose or suggest the Claim 1 feature of a signal identification device configured to identify a PCM signal. Further, Chung does not disclose or suggest the Claim 1 feature of setting the setting filter coefficients for the programmable digital high-pass and low-pass filters based on identification of a PCM signal in order to vary a bandpass filter characteristic for the programmable digital bandpass filter.

Mathe fails to overcome the significant shortcomings of Chung. Mathe is directed to a low power programmable digital filter adapted for use with a telecommunications system transceiver. The digital filter includes a first finite impulse response filter section for receiving an input signal and having a first transfer function. An infinite impulse response filter section is connected to the first finite impulse response filter section and has a second transfer function. A second finite impulse response filter section is connected to the infinite impulse response filter section and outputs a filtered output signal in response the receipt of the input signal by the programmable digital filter. The second finite impulse response filter section has a third transfer function. A programmable coefficient is included in the first, second, and/or the third transfer function. In a specific embodiment, the first transfer function has a first programmable coefficient. The second transfer function has a second programmable coefficient and the third transfer function has a third programmable

coefficient. The programmable digital filter further includes a processor for providing a control signal. A memory provides the first, second, and/or third programmable coefficients in response to the control signal. A high-pass filter section provides input to the first finite impulse response filter section. A multiplexer selectively bypasses the high-pass filter in response to a bypass control signal from the processor. The processor generates the bypass control signal in response to bias occurring in the input signal. In the illustrative embodiment, the first finite impulse response filter section includes a first jammer filter, a second jammer filter, and a third jammer filter for removing telecommunications jammer signals in the input signal. The first, second, and third jammer filters have first, second, and third jammer filter transfer functions with the first programmable coefficient, a fourth programmable coefficient, and a fifth programmable coefficient, respectively. The infinite impulse response filter section includes a first equalization filter and a second equalization filter.

In applying Mathe to the Claim 1, the Examiner considers a microprocessor **24** of Mathe to perform signal identification for identification of a PCM signal transmitted through the codec circuit. Referring to column 5, lines 5-16 of Mathe, a filter characteristic depends on a programmable coefficient b_1 , which is provided by microprocessor **24** (and microprocessor memory **26**). The coefficient b_1 is chosen differently for CDMA and FM signals. There is no disclosure or suggestion in Mathe that the microprocessor first identifies the incoming PCM signal and then the microprocessor selects the ranges of the coefficient in accordance with the identified PCM signal. As such, Mathe fails to disclose or suggest the Claim 1 feature of a

signal identification device configured to identify a PCM signal. Further, Chung does not disclose or suggest the Claim 1 feature of setting the setting filter coefficients for the programmable digital high-pass and low-pass filters based on identification of a PCM signal in order to vary a bandpass filter characteristic for the programmable digital bandpass filter. Therefore, there is no teaching or suggestion in Mathe, even if combined with the teachings of Chung, of the presently claimed subject matter.

Applicant respectfully submits that, in view of the above amendments and remarks, Chung and Mathe, either alone or in combination, do not teach or suggest all of the elements recited by amended claim 1. Accordingly, applicant respectfully requests that the rejection of claims under 35 U.S.C. §103(a) be withdrawn and the claim allowed at this time.

Claims 2-9 depend from claim 1. Therefore, the comments presented above relating to Claim 1 apply equally to Claims 2-9. Accordingly, applicant respectfully submits that Claims 2-9 should be allowed and the rejections withdrawn for the same reasons provided above for Claim 1.

CONCLUSION

In light of the above Amendments and Remarks, it is respectfully submitted that the present application is now in proper condition for allowance, and an early notice to such effect is earnestly solicited.

If any small matter should remain outstanding after the Patent Examiner has had an opportunity to review the above Amendments and Remarks, the Patent Examiner is respectfully requested to telephone the undersigned patent attorney in order to resolve these matters and avoid the issuance of another Official Action.

DEPOSIT ACCOUNT

The Commissioner is hereby authorized to charge any fees associated with the filing of this correspondence to Deposit Account No. 50-0426.

Respectfully submitted,

JENKINS, WILSON, TAYLOR & HUNT, P.A.

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